*Conclusion* AKI increases the duration of mechanical ventilation in postoperative course of TOF and is related to the preservation of the pulmonary valve. Using an acute protocol, Pediatric cardiac intensivist needs to be aggressive in fluid management and anticipate the indication of renal replacement therapy.

*Conflict of interest* The authors have not transmitted any conflicts of interest.

# CO 9

**Predicting fluid responsiveness in cardiac postoperative children: What about electrical cardiometry?**

Angèle Boet[1,*], Emir Mokfi[1], Michel Haman[1], Mohammed Ly[2], Emmanuel Lebret[2], Regine Roussin[2], Serge Demontoux[1], Jorgen Horer[2]
[1] *Centre chirurgical Marie-Lannelongue. Réanimation des cardiopathies congénitales, Le Plessis-Robinson, France.*
[2] *Centre chirurgical Marie Lannelongue, Chirurgie des cardiopathies congénitales, Le Plessis-Robinson, France.*

* Corresponding author: angele.boet@hotmail.fr

*Introduction* Postoperative fluid management is a milestone of post operative period concerning children with congenital heart disease. Electrical cardiometry (ICON®, Osypka Medical, San Diego, USA, Berlin, Germany) is a continuous noninvasive hemodynamic monitor used routinely in our unit. This study try to evaluate reliability of one of its parameters, stroke volume variation (SVV), to predict fluid responsiveness of our patient compared to classical parameters.

*Material and methods* Patients were included in post operative period. Stroke volume (SV), SVV on electrical cardiometry, cardiac output, central venous pressure, left auricular (LA) pressure, curve variation of invasive blood pressure, central venous pressure, saturation, LA and echography velocity time integral variation. Results are median (95% confidence interval). Responders to volume expansion (VE) had an increase in SV of at least 15% after VE.

*Results* 37 patients were included and 20 had VE. Before VE, SV weight index (1.48(0.26) vs 1.03(0.28) p=0.04) and SVV (14(2.4) vs 18(3.9) p=0.05) were significantly different between responders and non responders groups, with area under curve and cut off (figure 1) of 0.778 and 1.07 ml/kg and 0.767 and 16%.

All others parameters (clinic, echocardiography or invasive measures) have no significant difference and too low AUC, including delta aortic peak flow velocity on echography and delta invasive blood pressure.

These preliminary results confirme first ones on other bioimpedance device on reliability of SVV and SV weight index (Vergnaud 2014).

*Conclusion* Noninvasive measures of SVV and SV using ICON seems to give reliable data to guid fluid management in post operative period. Of course, these are preliminaries data, and larger cohort is necessary.

*Conflict of interest* The authors have not transmitted any conflicts of interest.

# CO 10

**Different tools to identify congenital heart diseases in databases: Electronic medical record and International classification of diseases**

Sarah Cohen[1,2,*], Anita Burgun[2,3], Laurence Iserin[1], Jean-Baptiste Escudié[2,3]
[1] *Adult congenital heart disease unit, Cardiology Department, M3C, Reference center for complex congenital heart diseases, European Georges-Pompidou Hospital, AP-HP, Paris, France.*
[2] *INSERM-UMRS 1138 Team 22, Cordeliers research center, Paris Descartes University, Paris, France.*
[3] *Biomedical Informatics and Public Health Department, European Georges-Pompidou Hospital, AP-HP, Paris, France.*

* Corresponding author: sarah.cohen@aphp.fr

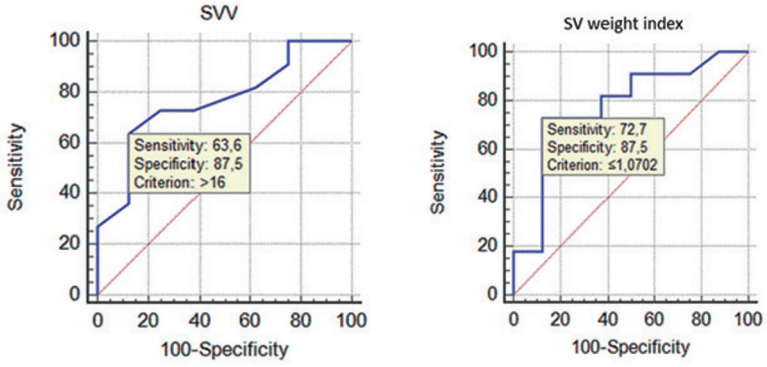
*Introduction* Administrative databases are often used for congenital heart disease (CHD) research and evaluation. In France, the Program of Medicalization of the Information System (PMSI) use the International Classification of Diseases Tenth Revision (ICD10) with little validation of the accuracy of the diagnostic codes. Another source of large cohorts is electronic health records (EHRs). The information content of clinical free texts is broader than structured information. We compare the prevalence of three CHD (Tetralogy of Fallot (TOF), Transposition of the great arteries (TGA) and aortic coarctation (Coa)) according administrative databases and according EHRs in an adult with CHD population (ACHD).

*Method* In a French computerized reference ACHD center, EHRs from the cardiology department were reviewed and classified according to the CHD diagnosis by a clinician to extract a clinical diagnosis for each patient. A web program was developed enabling to scroll on a single page all documents retained for a given patient. To facilitate this extraction, we also developed a set of regular expression for each selected clinical diagnosis. Parts of text matching a regular expression were highlighted. Using this clinical nomenclature as the referent, we report the prevalence of the ICD10 diagnosis codes for TOF, TGA and Coa.

*Results* We identified a cohort of 1055 adult CHD patients. All their discharges, consultations, letters and radiology reports constituted our free text corpus (9169 documents). Using the ICD10 codes, the prevalence was 2.12% for TOF, 1.6% for TGA and 0.6% for Coa. Based on the clinical nomenclature, there were respectively 2.25%, 1.55% and 1.6%.

*Conclusion* Analyses based on ICD10 codes may have substantial misclassification of CHD. Further studies are being made to evaluate the data quality of state administrative databases for ascertaining congenital heart defects (CHD) and specific diagnoses of CHD.

*Conflict of interest* The authors have not transmitted any conflicts of interest.




***CO9 – Figure 1: ROC curves.***